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AUTHOR Lochhead, Jack

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ABSTRACT

The goal of this paper is to relate liberation and the teaching of thinking. By looking at the great liberators throughout history, teachers can learn about their own craft. The goal of teaching thinking ought to be to develop individuals who can think for themselves. Such people have some measure of control over the meaning they make of their experiences and of the ways in which they structure their lives. They are thus empowered and liberated. Constructivism is one approach that presents some interesting challenges to education. The approach represents an understanding of the human condition that places primary emphasis on the independence of each person's interpretation of his or her own experience. A method proposed for approaching such a goal is to engage students in active thinking through some form of dialogue. Stimulating a sense of power and control in one's students necessarily involves giving up some forms of power teachers have traditionally held. Among these is the power to determine the validity of the conclusions reached by students. For the teacher of thinking the most difficult task is to learn how to trust one's own students. (LL)

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LIBERATION THINKING

Jack Lochhead

Scientific Reasoning Research Institute
University of Massachusetts
Amherst, MA 01003

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LIBERATION THINKING

Introduction

My goal in this talk will be to relate liberation and the teaching of thinking. In doing this I am not suggesting a comparison between those of us who teach and those who risk and give their lives so that others may live free. Rather I am saying that there is much that we in education can learn from the great liberators about our own craft.

On the surface, a liberation movement is primarily concerned with overpowering some oppressive force such as: a colonialist government, a feudal power structure, capitalism, communism, or a racist-sexist society. In practice a large part of the struggle is waged among the oppressed as they learn to redefine themselves. Similarly, if one is teaching thinking it is easy to get caught up in the surface phenomena of strategies and techniques. In fact, the struggle really must be waged by individual students as they take responsibility for their own thinking.

Thinking is something which individuals must do themselves. I can tie your shoe, I can calculate your income tax, but I cannot think for you.

It is possible to influence what people think by controlling what they see and hear, but you cannot control the interpretation they make of that experience.

You can partially control what people say by threatening to kill them or by giving them low grades, but you are not controlling how they think.

My view of thinking education has been colored by a particular view of knowledge and learning. It is known as constructivism and represents an understanding of the human condition that places primary emphasis on the independence of each person's interpretation of his or her own experience. How we think about what we hear or see is determined by our own mental processes and not by the sights and sounds themselves. Even though we often are only slightly aware of these processes it is still possible to recognize that they operate differently in each of us. In particular, the sense you make of my ramblings is made by you and not by me. No two people will interpret what I say in exactly the same way.

Constructivism presents some interesting challenges to education. What is a teacher to do if each student in the class is making a different interpretation of the lecture and the textbook? How, in fact, is communication possible at all? Surprisingly, there is a simple answer, providing one is willing to relinquish the goal of making students in his or her own image. When we want to be sure someone sees an issue in more or less the same way we do, we talk with them about the situation. We ask questions, argue, speculate and eventually negotiate what Maturana calls a "consensual domain". It is only through a process of extended discussion that some form of meaningful communication is possible.

There are bound to be some pragmatists among you who are wondering how a teacher with 30, 50 or even 200 students can engage in an extended discussion with each student. Obviously that is impossible. But what can happen is that small groups of students can discuss ideas among themselves. The teacher has

little control over what happens in these discussions, and the results can be chaotic. Yet what has been given up is really just the pretense of an imposed order: the students' ideas were always there and always their own, even when they kept those ideas to themselves. Reflect back on your own experience of the past five minutes. What fraction of the time were you giving my words your undivided attention? Consider the ideas that floated through your head. Were any of them conveyed to you by me or were they largely generated by you in response to something I said, something you had thought, or something you saw, smelled, felt, or otherwise felt. If the content of lectures were determined by the ideas they generate most would be found to be about sex, football and food.

Liberation

I am very fortunate in that I live in circumstances where the struggle for liberation is outside my direct experience. My limited knowledge therefore comes from reading a few of the works of those who were thrust into the action. What follows will be mostly in their words.

I have said that thinking can only be done by the individual and that it cannot be controlled by an external force. Unfortunately many people believe that their thinking can or should be controlled and they therefore act as though it was. Steven Biko was a brilliant young South African who gave his life struggling against just such a phenomenon. He described the situation as follows:

> *What I have tried to show is that in South Africa, political power has always rested with white society. Not only have the whites been guilty of being on the offensive, but, by skillful maneuvers, they have managed to control the responses of the blacks to the provocation. Not only have they kicked the black man, but they have also told him how to react to the kick. For a long time, the black has been listening with patience to the advice he has been receiving on how best to respond to the kick. With painful slowness, he is now beginning to show that he realizes it is his right and duty to respond to the kick in the way he sees fit.*
>
> *S. Biko*
>
> *Woods, p. 59*

For Biko, the solution to this problem was Black Consciousness. To some his vision may sound almost reactionary in its conservatism. Yet it was his pursuit of that goal which led to his murder while in the hands of the police.

> *The philosophy of Black Consciousness, therefore, expresses group pride and the determination by the blacks to rise and attain the envisaged self. At the heart of this kind of thinking is the realization by the blacks that the most potent weapon in the hands of the oppressor is the mind of the oppressed. Once the*

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> *latter has been so effectively manipulated and controlled by the oppressor as to make the oppressed believe that he is a liability to the white man, then there will be nothing the oppressed can do that will really scare his powerful masters. Hence, thinking along the lines of Black Consciousness makes the black man see himself as a being, entire in himself, and not as an extension of a broom or additional leverage to some machine. At the end of it all, he cannot tolerate attempts by anybody to dwarf the significance of his manhood. Once this happens, we know that the real man in the black person is beginning to shine through.*
>
> *S. Biko*
>
> *Woods, p. 59*

> *The first step, therefore, is to make the black man come to himself; to pump back life into his empty shell; to infuse him with pride, and dignity, to remind him of his complicity in the crime of allowing himself to be misused and therefore letting evil reign supreme in the country of his birth. This is what we mean by an inward-looking process. This is the definition of "Black Consciousness."*
>
> *S. Biko*
>
> *Woods, p. 131*

(I must step outside this presentation for a moment to warn against a possible misinterpretation of what has been said. When Biko refers to a "complicity in the crime" he is not implying blame or guilt. Only the oppressors and their ancestors can be held responsible for the situation as it exists now. Biko's concern was with wresting responsibility for the future).

The Brazilian educator and internationally known literacy-liberator, Paulo Freire, has described much the same situation.

> *Thus, it is not the limit-situations in and of themselves which create a climate of hopelessness, but rather how they are perceived by men at a given historical moment: whether they appear as fetters or as insurmountable barriers. As critical perception is embodied in action, a climate of hope and confidence develops which leads men to attempt to overcome the limit-situations.*
>
> *Freire, p. 89*

> *Self-Deprecation is another characteristic of the oppressed, which derives from their internalization of the opinion the oppressors hold of them. So often do they hear that they are good for nothing, know nothing, and are incapable of learning anything - that they are sick, lazy, and unproductive - that in the end they become convinced of their own unfitness.*

Freire, p. 49

> *The "fear of freedom" which afflicts the oppressed, a fear which may equally well lead them to desire the role of oppressor or bind them to the role of oppressed, should be examined. One of the basic elements of the relationship between oppressor and oppressed is prescription. Every prescription represents the imposition of one man's choice upon another, transforming the consciousness of the man upon another, transforming the consciousness of the man prescribed to into one that conforms with the prescriber's consciousness. Thus, the behavior of the oppressed is a prescribed behavior, following as it does the guidelines of the oppressor.*
>
> *Freire, p. 31*

It is often claimed, quite falsely, that education is inherently liberating. The University from which I graduated has as its motto the pompous lie " veritas vos liberabat - the truth will make you free". In fact formal education is the primary mechanism through which societies perpetuate oppression. Biko said:

> *Secondly, and this we regard as the most important, the black man in himself has developed a certain state of alienation, he rejects himself precisely because he attaches the meaning white to all that is good, in other words, he equates good with white. This arises out of his living and it arises out of his development from childhood. When you go to school, for instance, your school is not the same as the white school, and the conclusion you reach is that the education you get there cannot be the same as what the white kids get at school.*
>
> *S. Biko*
>
> *Woods, p. 161*

Jerry Farber was less restrained and polite. He makes a rather far fetched comparison between the intellectual conditions of American College students and the physical and mental restrictions placed on Black Americans.

> *First, let's see what's happening now. Let's look at the role students play in what we like to call education. At Cal State L.A., where I teach (make that taught), the students have separate and unequal dining facilities. If I take them into the faculty dining room, my colleagues get uncomfortable, as though there were a bad smell. If I eat in the student cafeteria, I become known as the educational equivalent of a niggerlover. In at least one building, there are even rest rooms which the students may not use. At Cal State, also, there is an*

> *unwritten law barring student/faculty lovemaking. Fortunately, this miscegenation law, like its Southern counterpart, is not 100 percent effective.*
>
> *Farber, p. 114*

Farber, like Biko, is most distressed when the oppressed give credence to their own status.

> *The saddest cases among both black slaves and student slaves are the ones who have so thoroughly introjected their masters' values that their anger is all turned inward. At Cal State, these are kids for whom every low grade is torture, who stammer and shake when they speak to a professor, who go through an emotional crisis every time they're called upon during class.*
>
> *Farber, p. 119*

My own rather pedestrian experience is with teaching very basic mathematical thinking to weak math students. Obviously, mathematics is not an evil on the same scale as racism and slavery. Nevertheless there are parallels. Many students feel threatened by mathematics, they suffer from a mathematical inferiority complex that has been quite deliberately engendered in them by the mathematical establishment. They believe strongly that mathematical truth, and the correctness of their own work, is something which must be decided by the authorities and not by they themselves. They expect their teachers to kick them and to tell them how to react to the kick.

In the Basic Math Program at the University of Massachusetts we require that students review their work and to tell us whether they think it is correct and why. Students, at first, are outraged by this request and tell us in no uncertain terms that it is our responsibility, not theirs, to make such evaluations. We ask them to work in groups and to comment on each others ideas. Again they cry foul, declaring that such group activity is only the confused confusing the confused. The major part of our efforts during a full semester are devoted to overcoming these obstacles, which a dozen years of formal education has so carefully nourished. We believe that little serious progress is possible until students have developed some minimal level of mathematical consciousness. It is here that teachers may have to act in a logically inconsistent manner, for which they should make no apology (lochhead, 1988). They may need to coerce students into entering a less coersive environment.

> *They call themselves ignorant and say the "professor" is the one who has knowledge and to whom they should listen. The criteria of knowledge imposed upon them are the conventional ones. "Why don't you," said a peasant participating in a cultural circle, "explain the pictures first? That way, it'll take less time and won't give us a headache."*
>
> *Freire, p. 49*

Just give me the formula, then I will be able to do the problems without wasting so much time.
Anonymous student

beration Movements

There is, potentially, a paradox in the notion of a liberation movement. vements tend to be composed of leaders and followers; but liberation cannot found by following. Leadership within liberation is a subtle business that st avoid the concentration of power and control.

The same paradox exists in education and particularly the teaching of inking. If the teacher is telling the students how to think then the udents are not thinking.

What then is the appropriate role of a teacher in these situations? For answer to that question I turn to Paulo Freire. First let us see how eire characterizes conventional education.

> *A careful analysis of the teacher-student relationship at any level, inside or outside the school, reveals its fundamentally narrative character. This relationship involves a narrating Subject (the teacher) and patient, listening objects (the students). The contents, whether values or empirical dimensions of reality, tend in the process of being narrated to become lifeless and petrified. Education is suffering from narration sickness.*
>
> *Freire, p. 57*

> *Narration (with the teacher as narrator) leads the students to memorize mechanically the narrated content. Worse yet, it turns them into "containers," into "receptacles" to be "filled" by a teacher. The more completely he fills the receptacles, the better a teacher he is. The more meekly the receptacles permit themselves to be filled, the better students they are.*

ote that Freire sees the same master slave relation as Farber does.

> *In the banking concept of education, knowledge is a gift bestowed upon those who they consider to know nothing. Projecting an absolute ignorance onto others, a characteristic of the ideology of oppression, negates education and knowledge as processes of inquiry. The teacher presents himself to the students as their necessary opposite; by considering their ignorance absolute, he justifies his own existence. The students, alienated like the slave in the Hegelian dialectic, accept their ignorance as*

> *justifying the teacher's existence - but, unlike the slave, they never discover that they educate the teacher.*
>
> ...
>
> *On the contrary, banking education maintains and even stimulates the contradiction through the following attitudes and practices, which mirror oppressive society as a whole:*
>
> *(a) The teacher teaches and the students are taught;*
> *(b) The teacher knows everything and the students know nothing;*
> *(c) The teacher thinks and the students are thought about;*
> *(d) The teacher talks and the students listen - meekly;*
> *(e) The teacher disciplines and the students are disciplined;*
> *(f) The teacher chooses and enforces his choice, and the students comply;*
> *(g) The teacher acts and the students have the illusion of acting through the action of the teacher;*
> *(h) The teacher chooses the program content, and the students (who were not consulted) adapt to it;*
> *(i) The teacher confuses the authority of knowledge with his own professional authority, which he sets in opposition to the freedom of the students;*
> *(j) The teacher is the subject of the learning process, while the pupils are mere objects.*
>
> *Freire, p. 58-59*

What then would an education for liberation be like?

> *Those truly committed to liberation must reject the banking concept in its entirety, adopting instead a concept of men as conscious beings, and consciousness as consciousness intent upon the world. They must abandon the educational goal of deposit-making and replace it with the posing of problems of men in their relations with the world. "Problem-posing" education, responding to the essence of consciousness - intentionality - rejects communiqus and embodies communication. It epitomizes the special characteristic of consciousness: being conscious of, not only as intent on objects, but as turned in upon itself in a Jasperian "split" - consciousness as consciousness of consciousness.*
>
> *Freire, p. 66-67.*

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ut simply,

> *Liberating education consists in acts of cognition, not transferrals of information.*
>
> *Freire, p. 67*

This does not mean that education can exist without some form of information transfer; but rather that liberation stems from those aspects of education that involve thinking. So far I have managed to avoid giving a definition of thinking. Very broadly, thinking can be viewed as making meaningful models of our experiences and using those models to plan or "control" our future experiences. When we are aware of our thinking it seems to take place as a sort of internal dialogue where we either debate issues with ourselves or else picture situations from many different perspectives. It is perhaps for this reason that many of the proponents of thinking instruction prescribe classroom dialogue as a major component of their method.

> *Through dialogue, the teacher-of-the-students and the students-of-the-teacher cease to exist and a new term emerges: teacher-student with students-teachers. The teacher is no longer merely the-one-who-teaches, but one who is himself taught in dialogue with the students, who in turn while being taught also teach. They become jointly responsible for a process in which all grow. In this process, arguments based on "authority" are no longer valid; in order to function, authority must be on the side of freedom, not against it. Here, no one teaches another, nor is anyone self-taught. Men teach each other, mediated by the world, by the cognizable objects which in banking education are "owned" by the teacher.*
>
> *Freire, p. 67*

There are serious obstacles to creating a classroom atmosphere that supports thoughtful dialogue. I referred earlier to student attitudes which cause them to reject the validity of such activity. But by far the greatest barrier is often in the teacher.

> *On the other hand, dialogue cannot exist without humility. The naming of the world, through which men constantly re-create that world, cannot be an act of arrogance. Dialogue, as the encounter of men addressed to the common task of learning and acting, is broken if the parties (or one of them) lack humility. How can I dialogue if I always project ignorance onto others and never perceive my own? How can I dialogue if I regard myself as a case apart from other men - mere "its" in whom I cannot recognize other "I's"? How can I dialogue if I consider myself a member of the in-group of "pure" men, the owners of truth and knowledge, for whom all non-members are "these people" or "the great unwashed?" How can I*

> *dialogue if I start from the premise that naming the world is the task of an elite and that the presence of the people in history is a sign of deterioration, thus to be avoided? How can I dialogue if I am closed to - and even offended by - the contribution of others? How can I dialogue if I am afraid of being displaced, the mere possibility causing me torment and weakness? Self-sufficiency is incompatible with dialogue. Men who lack humility (or have lost it) cannot come to the people, cannot be their partners in naming the world. Someone who cannot acknowledge himself to be as mortal as everyone else still has a long way to go before he can reach the point of encounter. At this point of encounter, there are neither utter ignoramuses nor perfect sages; there are only men who are attempting, together, to learn more than they now know.*
>
> *Dialogue further requires an intense faith in man, faith in his power to make and remake, to create and re-create, faith in his vocation to be more fully human (which is not the privilege of an elite, but the birthright of all men).*
>
> *Freire, p. 78 - 79*

In the abstract such humility may seem simple but imagine a math teacher who could sit with his students as an equal in the struggle to construct mathematical meaning. This is precisely what we seek in the Basic Math program.

> *We have found that our best instructors spend a great deal of time listening to student discussions (which are the major component of our classes) but very little time actively participating; but when they do contribute, it is in such a way as to leave the students in control and to insure that all students remain active participants. To restrain one's natural enthusiasm to such a limited (but highly effective) role, it is necessary to have developed a great deal of humility concerning the probable impact of one's words of wisdom. It is also critical to appreciate the value in having a well developed sense of how the students conceive the mathematics.*
>
> *(Lochhead, p. 13)*

> *Constructivist teaching involves giving up the notion that you can do for students what, in practice, they must do for themselves. It demands that you trust your students' minds as much as your own, and that you have faith in people's ability to learn. It requires humility concerning one's own ability to explain or*

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> *expound. But the essence of constructivist teaching is in the realization that you will never know what is going on (in the minds of your students), yet it is fun (and rather useful) to try and find out.*
>
> *Lochhead, p. 18*

The Struggle

It is easy to make a list of stirring quotations. It is very difficult to carry out what they call for. While the type of education I have described is entirely practical there are many obstacles to its implementation. I have already alluded to some of the reasons both students and teachers give for resisting their own liberation. If a teacher is to be successful in overcoming such challenges he or she needs to be properly prepared.

First, it is necessary to understand a great deal about one's students and the nature of the mental struggles they will have to go through. These are of at least two different kinds. There is the epistemological struggle which to my mind is best described by Perry (1970). Here students must come to develop a new view of learning which has shattering consequences to many of their other cherished beliefs. Then there is the path to expertise within the discipline one is teaching. It is not enough to know one's subject well. Teachers must also understand how students learn the key concepts of the field and the stages of development they go through while learning them. At this point only a few fields such as physics and mathematics have been studied at any level of detail (see Steffe et al., 1983; Halloun & Hestenes, 1985; and Silver, 1985). Teachers in most other disciplines will have to do the best they can to build their own models of student development. A good place to start is with Piaget who had something to say about virtually everything, if you can only find where he wrote it.

Second, after having come to understand one's students one needs to know how to promote effective dialogue among them. It rarely is wise to assume that students know how to engage in meaningful discussion. Various techniques for structuring group work have been developed and in my experience it is best to use several of them rather than depending on one model. We begin with a highly structured system (Whimbey and Lochhead 1986) and gradually move into more open approaches. In addition to a system for dialogue one also must have an appropriate content. This is usually some question or problem which the teacher poses for the students. It is here that the teacher's expertise is put to the test. Powerful questions reflect a deep understanding of the critical concepts in one's discipline and a thorough grasp of ways in which students can come to know them. Questions also involve some magic. They are only effective if they grab the attention of the students and I, at least, have not yet found a thoroughly reliable method for generating them.

Conclusion

Our goal in teaching thinking ought to be to develop individuals who can think for themselves. Such people have some measure of control over the meaning they make of their experiences and of the ways in which they structure their lives. They are thus mentally empowered and liberated. The most

effective method I know of for approaching such a goal is to engage students in active thinking through some form of dialogue.

> *Critical and liberating dialogue, which presupposes action, must be carried on with the oppressed at whatever the stage of their struggle for liberation. The content of that dialogue can and should vary in accordance with historical conditions and the level at which the oppressed perceive reality. But to substitute monologue, slogans, and communiques for dialogue is to attempt to liberate the oppressed with the instruments of domestication. Attempting to liberate the oppressed without their reflective participation in the act of liberation is to treat them as objects which must be saved from a burning building; it is to lead them into the populist pitfall and transform them into masses which can be manipulated.*
>
> *Freire, p. 52*

But stimulating a sense of power and control in one's students necessarily involves giving up some forms of power which teachers have traditionally held. Among these is the power to determine the validity of the conclusions reached by students. For the teacher of thinking the most difficult task is to learn how to trust one's own students.

> *To achieve this praxis, however, it is necessary to trust in the oppressed and in their ability to reason. Whoever lacks this trust will fail to initiate (or will abandon) dialogue, reflection, and communication, and will fall into using slogans, communiques, monologues, and instructions.*
>
> *Freire, p. 53*

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